

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. **(Currently Amended)** A bacteria concentrate in liquid form comprising adapted and viable bacteria at a concentration between 5×10^{10} and 5×10^{11} cfu/ml, said adapted and viable bacteria being more resistant to various physiochemical stresses than a non-adapted form of the bacteria, wherein the concentrate is obtained by the successive steps of propagation of the bacteria in a culture medium, adaptation of the bacteria, washing of the culture medium containing the adapted bacteria by tangential microfiltration, and concentration of bacteria in the washed medium by tangential microfiltration, and

wherein the adaptation of the bacteria is determined by measuring the size of the bacteria using at least one technique selected from the group consisting of flow cytometry, determination of relative permittivity, and microscopy.

2. (Previously Presented) The concentrate according to claim 1, wherein the bacteria are lactic bacteria, *Lactobacillus* spp., *Bifid bacterium* spp., *Streptococcus* spp. or *Lactococcus* spp. genera.

3. (Previously Presented) The concentrate according to claim 1, wherein the adapted bacteria have at least one of the following characteristics when they are added to a food product:

i) a survival rate above 80 % after 14 days in a food product at a temperature between 4 C and 45 C, with said food product having a pH between 3 and 7, or

ii) a survival rate above 60 % and advantageously above 80 % after 28 days in a food product at a temperature between 4 C and 45 C, with said food product having a pH between 3 and 7.

4. (Previously Presented) The concentrate according to claim 3, wherein the bacteria have both characteristics i) and ii).

5. (Previously Presented) The concentrate according to claim 3, wherein the food product is a dairy product and/or a drink.

6. (Previously Presented) The concentrate according to claim 1, wherein the bacteria are viable for a period of between 4 and 6 weeks.

7. (Canceled)

8. (Previously Presented) The concentrate according to claim 1, wherein the adaptation of the bacteria is further determined by measuring parameters of the bacteria culture medium and/or parameters of the bacteria other than size.

9. (Previously Presented) The concentrate according to claim 8, wherein the parameters of the culture medium are the pH, the osmotic pressure and/or the temperature.

10. (Previously Presented) The concentrate according to claim 9, wherein the parameter of the culture medium is the pH and the adaptation step is performed by reducing the pH by natural acidification.

11. (Canceled)

12. (Previously Presented) The concentrate according to claim 8, wherein the bacteria adaptation step reduces the size of the bacteria.

13. (Previously Presented) The concentrate according to claim 1, wherein the distribution of lengths of each bacterium of said concentrate are between 0.1 and 10 micrometers.

14. (Previously Presented) The concentrate according to claim 1, wherein its pH is between 3 and 6.

15. (Previously Presented) The concentrate according to claim 1, wherein it is preserved at a temperature between -50 C and 4 C after packaging.

16. (Previously Presented) The concentrate according to claim 15, wherein it is reheated to a temperature between 25 C and 45 C, before being used.

17. (Previously Presented) A food additive comprising the concentrate according to claim 1.

18. (Canceled)

19. (Previously Presented) A flexible, hermetically sealed and sterile bag containing the concentrate according to claim 1.

20. (Previously Presented) A food product comprising the liquid concentrate of adapted and viable bacteria according to claim 1.

21. (Previously Presented) The food product to claim 20, wherein it is a dairy product or a drink.

22. (Previously Presented) A method for producing a the food product according to claim 20, comprising adding the liquid concentrate of adapted and viable bacteria to the food product at the end of a production line and before packaging of the food product.

23. (Previously Presented) The method according to claim 22, wherein the liquid concentrate of adapted and viable bacteria is added to the food product in the line by pumping.